

# SIMPSON STREET DRAINAGE STAGE 2

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Contract Superintendent



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WARRNAMBOOL  
CITY COUNCIL

Warrnambool is located on the native lands of the Maar nation and translated means

*place between two rivers*



# CONTENTS

- Aim
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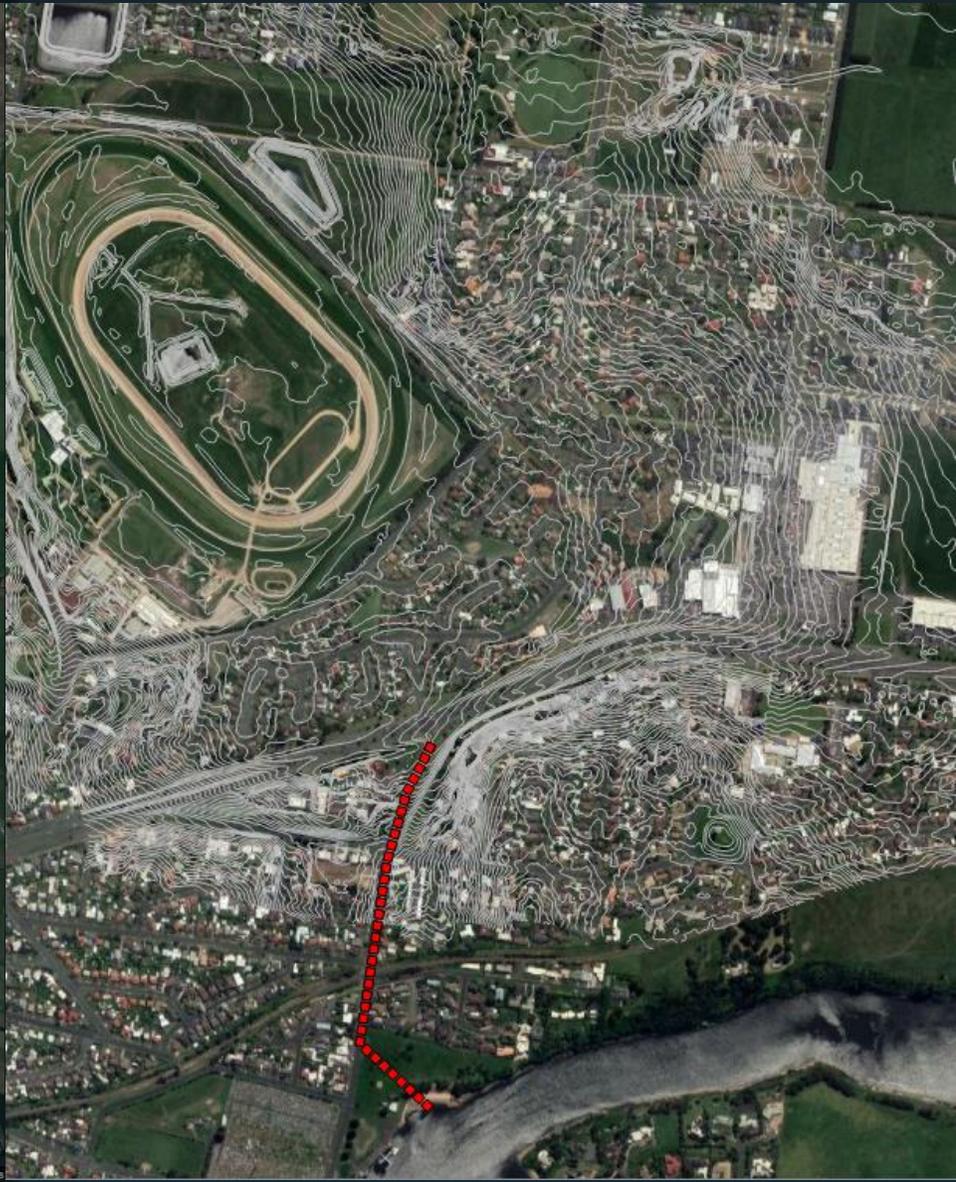
# AIM

- Divert catchment away from ageing and under capacity Simpson Street Tunnel to protect infrastructure
- Provide drainage infrastructure and flood mitigation to developing area of Warrnambool
- Provide stormwater harvesting option for the Racecourse

# DESIGN AND MAINTENANCE

- Different ways to design infrastructure
- Great engineering design and construction
- Failure in performance
- Maintenance practicalities and capabilities

# BACKGROUND



Imagery ©2019 Maxar Technologies, Maxar Technologies, Data SIO, NOAA, U.S. Navy, NGA, GEBCO, TerraMetrics, Map data ©2019 Australia Terra



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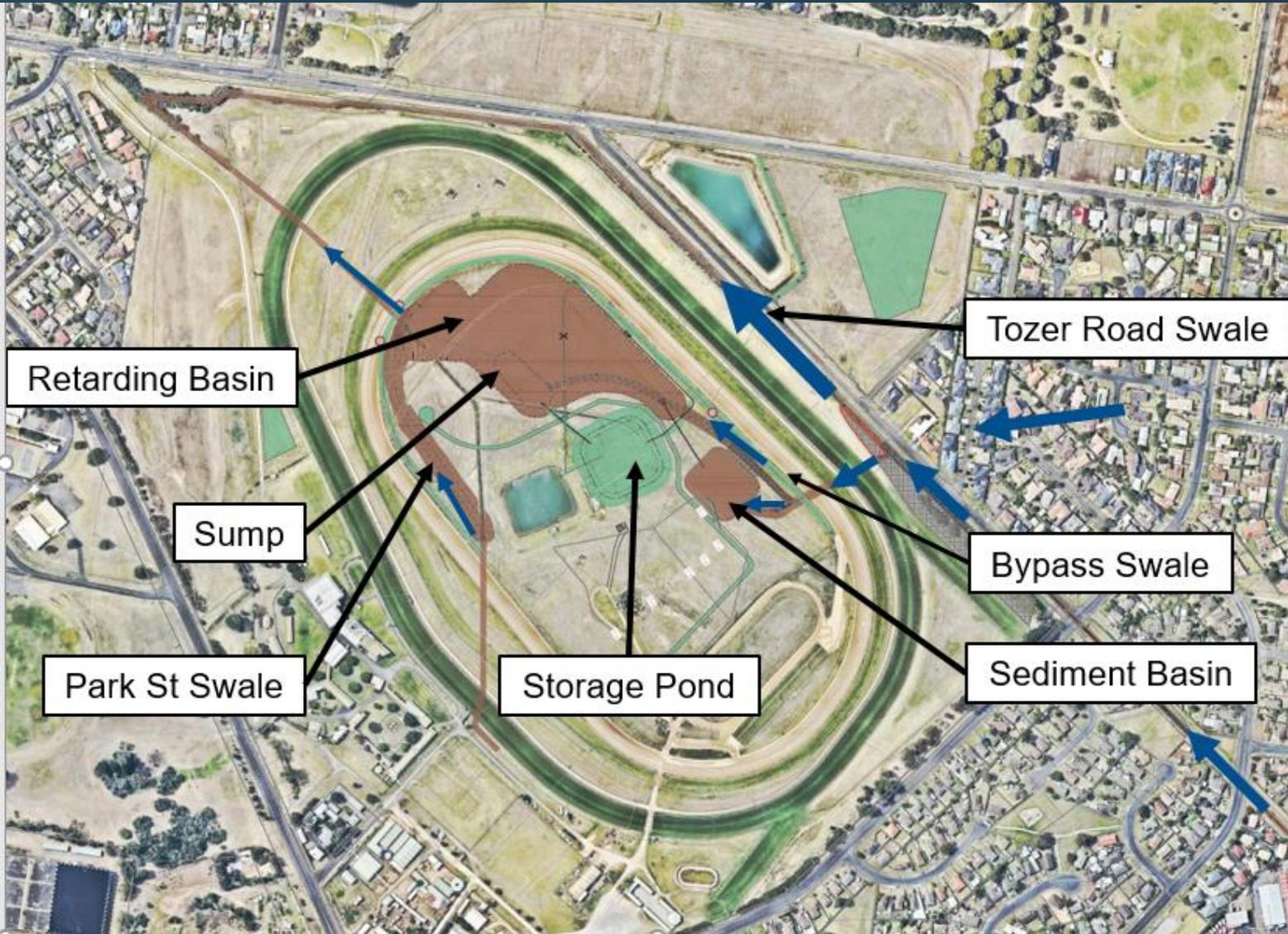


## Stage 2

- Diversion of 24 Ha
- Diversion Drain
- Sedimentation Basin
- Retardation Basin
- Storage dam

## Possible Future Works

- Extend Diversion drain to Highway
- Expand Retardation Basin
- Upgrade Outfall to Russell Creek



- Retarding basin to cater for existing catchment plus 24ha diverted catchment
- Diversion of runoff towards the retarding basin via pit and pipe
- The flowrate up to 10%AEP will be diverted towards the retarding basin
- The flowrate higher than 10% AEP will be directed to the Tozer Road channel
- Sediment basin will cater for the flow up to 3mnts (95% AEP)
- Higher flow, up to 10% AEP will be directed to the Retarding Basin
- The existing outlet will cater for the flow discharging from Park Street drainage system and the Retarding Basin



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# PROCUREMENT

- External delivery through competitive Tender
- Procurement designed to encourage local participation and upskilling of Contractor
- Initial cost estimate outside budget. VfM exercise resulted in decreased retarding basin size with ability to enlarge in the future
- 5 Tenders submitted
- Award to local Contractor, McKinnon Quarries & Civil
- Winning tender not lowest cost

# CONSTRUCTION (*ongoing*)

## Warrnambool City Council Team

- Scott Cavanagh – Principal (*Director City Infrastructure*)
- Luke Coughlan – Superintendent (*Manager Infrastructure Services*)
- Rohan McKinnon – Project Manager (*Senior Engineer*)
- Abel Farrell – Construction Inspector (*Team Leader*)



28<sup>th</sup> November 2018

- Bulk of earthworks completed over summer
- Management processes and work times to allow continued track work and race events (work hours 9am – 7pm)

6<sup>th</sup> December 2018

- Track crossing works completed early to allow time for re-establishment of turf before use in April
- Multiple disused drainage lines discovered, and six instances of asbestos internal to the track



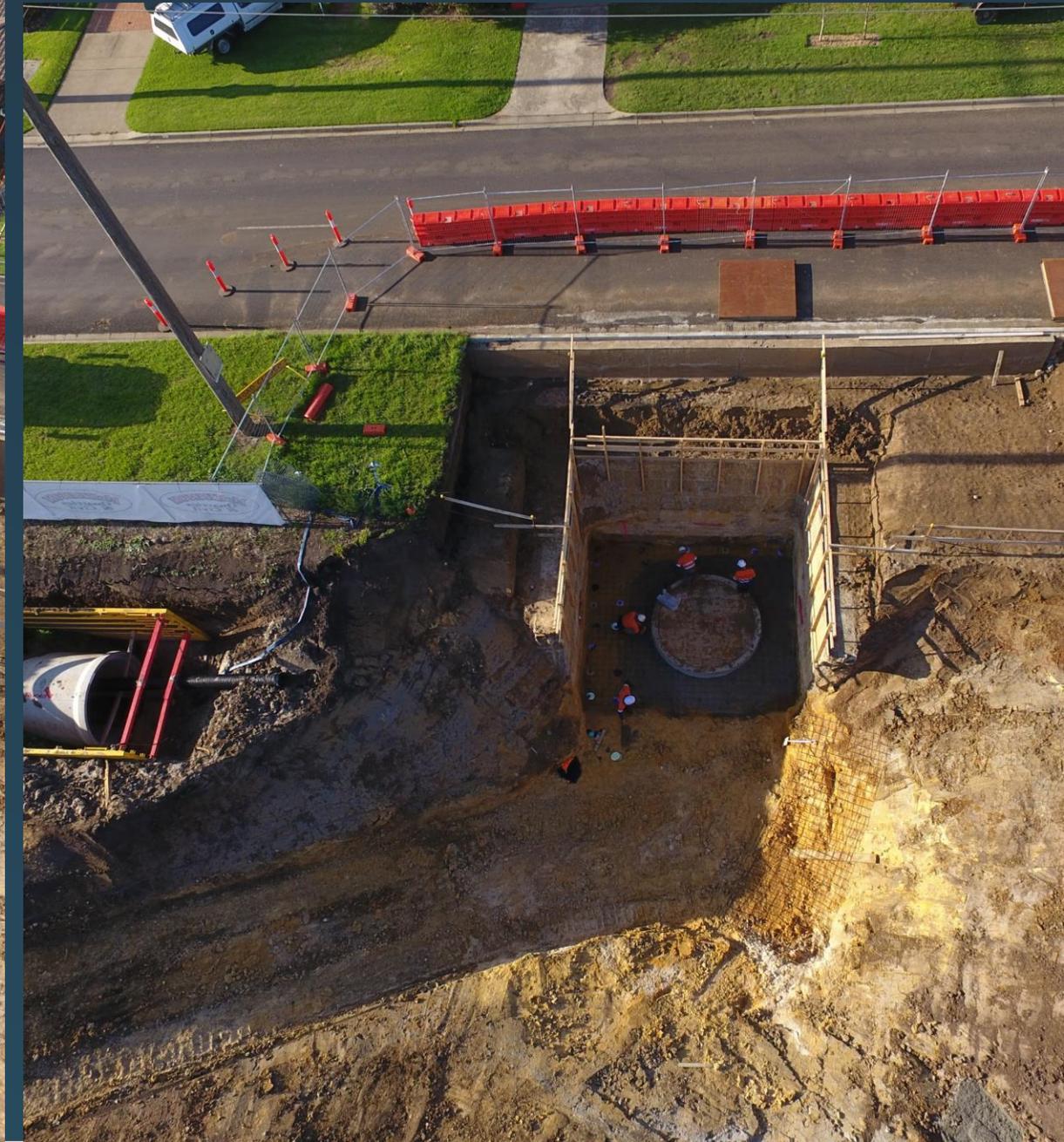


- Material from the centre of the track was landscaped into two areas around the racecourse
- Cost prohibitive if material could not be accommodated in these locations



## GPT Issues

- GPT required 8 m excavation 2 m from edge of road pavement
- Moved upstream slightly to avoid power pole
- In ground reinforced retaining wall needed to be designed and constructed specifically to protect excavation



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22<sup>nd</sup> March 2019

- Progress
- Rock beaching and overflow from sediment basin



14<sup>th</sup> May 2019

- Landscaping finished prior to May race carnival
- Carnival is a significant draw card for the city and it was a relief that the works progressed to a point where they did not impact the carnival



22<sup>nd</sup> August 2019

Current status:

- internal track works complete
- Connection to divert catchment in the next month
- Initial water quality testing results received and being assessed

# BUDGET

| Description                               | Budget (Ex GST)    | Amount (Ex GST)    |
|---|--------------------|--------------------|
| Simpson St Stage 1 Tunnel Relining        | \$2,250,000        | \$1,990,000        |
| Simpson St Stage 2 Racecourse Civil Works | \$4,750,000        | \$4,450,000        |
| <b>Total</b>                              | <b>\$7,000,000</b> | <b>\$6,440,000</b> |

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# Special Thanks

- Rohan McKinnon – Project Manager
  
- Abel Farrell – Construction Inspector and Drone Operations Expert

